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#31	Search <b>Kluyveromyces AND reductase AND (enone or ketone or carbon)</b> Field: Title/Abstract	16:13:20	0

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Jan 29 2004 15:06:34



# results of BLAST

**BLASTP 2.2.8 [Jan-05-2004]**

**Reference:**

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1076620068-13214-9170067263.BLASTQ3

**Query=**

(118 letters)

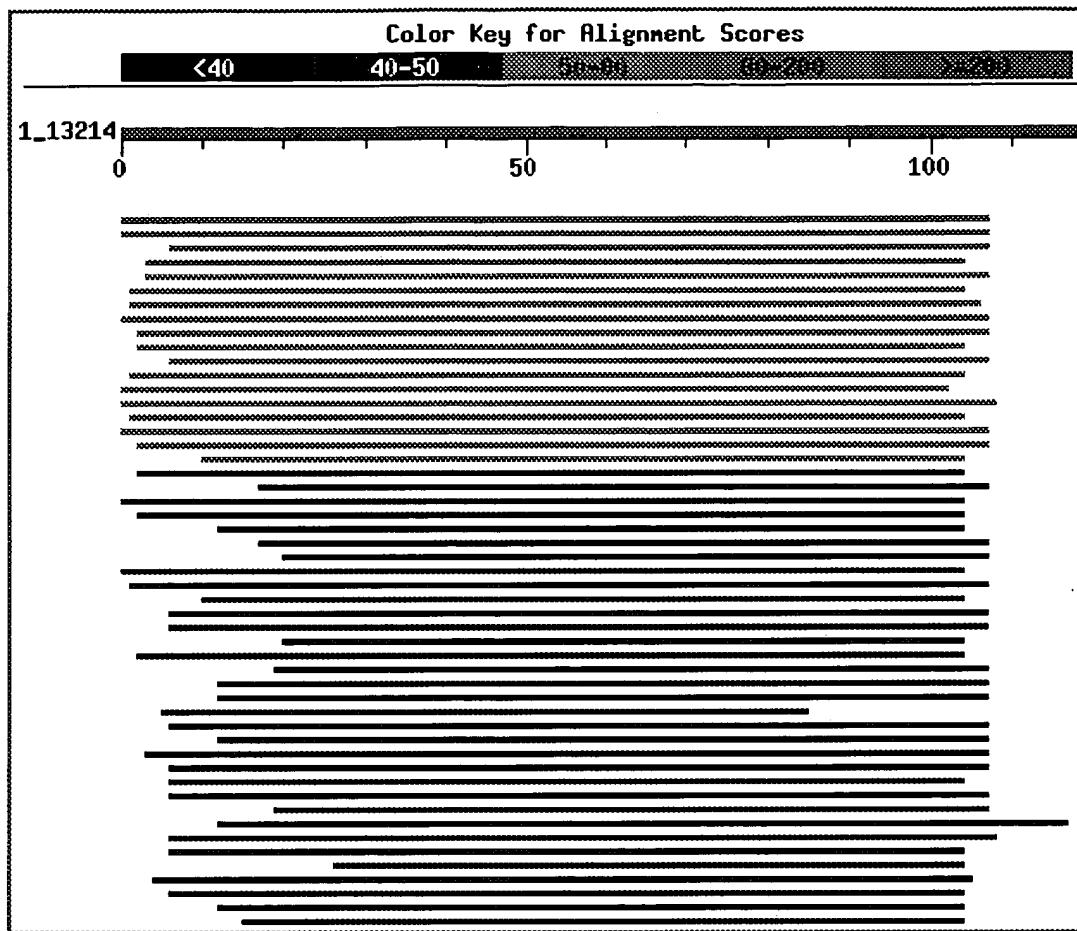
**Database:** All non-redundant GenBank CDS  
translations+PDB+SwissProt+PIR+PRF  
1,643,721 sequences; 539,141,899 total letters

If you have any problems or questions with the results of this search  
please refer to the [BLAST FAQs](#)

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## Distribution of 100 Blast Hits on the Query Sequence

Mouse-over to show define and scores. Click to show alignments



		Score (bits)	E Value
Sequences producing significant alignments:			
qi 6324195 ref NP_014265.1	Ynl134cp [Saccharomyces cerevisiae]	135	1e-31
qi 6323493 ref NP_013565.1	Hypothetical ORF; Ylr460cp [Saccharomyces cerevisiae]	134	3e-31
qi 6319945 ref NP_010026.1	Hypothetical ORF; Ycr102cp [Saccharomyces cerevisiae]	127	4e-29
qi 40741495 gb EAA60685.1	hypothetical protein AN8651.2 [Arabidopsis thaliana]	96	1e-19
qi 1729996 sp P54006 TOXD COCCA	TOXD protein >gi 1027511 emb AN8651.2  [Arabidopsis thaliana]	77	7e-14
gi 38111915 gb EAA57410.1	hypothetical protein MG08380.4 [Arabidopsis thaliana]	68	3e-11
gi 38111928 gb EAA57421.1	hypothetical protein MG08391.4 [Arabidopsis thaliana]	63	1e-09
gi 38106089 gb EAA52440.1	hypothetical protein MG05132.4 [Arabidopsis thaliana]	61	3e-09
gi 40747875 gb EAA67031.1	hypothetical protein AN8409.2 [Arabidopsis thaliana]	59	2e-08
gi 38105395 gb EAA51829.1	hypothetical protein MG03424.4 [Arabidopsis thaliana]	57	5e-08

**Alignments**

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>qi|6324195|ref|NP\_014265.1| Ynl134cp [Saccharomyces cerevisiae]  
 qi|1730779|sp|P53912|YNN4\_YEAST HYPOTHETICAL 41.2 KD PROTEIN IN FPR1-TOM22 INTERG  
 qi|1078063|pir||S55149 hypothetical protein YNL134c - yeast (Saccharomyces cerevisiae)  
 qi|854503|emb|CAA86891.1| orf14 [Saccharomyces cerevisiae]  
 qi|1302076|emb|CAA96016.1| unnamed protein product [Saccharomyces cerevisiae]

Length = 376

Score = 135 bits (341), Expect = 1e-31  
 Identities = 65/109 (59%), Positives = 82/109 (75%), Gaps = 1/109 (0%)

Query: 1 SVPTTQKAVIIEGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAKYKIGPEGGSIL 60  
 S+P T KAV+IE KAVVK D+ +PEL+EG L+K AVAGNPTDWKH +KIGP+G++L  
 Sbjct: 4 SIPETMKAVVIENGKAVVKQDIPPIPELEEGFVLIKTVAVAGNPTDWKHIDFKIGPQGALL 63

Query: 61 GCDIAGTVVKLGPNA-STDLKVGDTGFGFVHGASQTDPKNGAFAEYARV 108  
 GCD AG +VKGPN + +GD +G +HGAS P NGAFAY+ +  
 Sbjct: 64 GCDAAGQIVVKLGPNVDAARFAIGDYIYGVIHGASVRFPSNGAFAEYSAI 112

[>gi|6323493|ref|NP\_013565.1| Hypothetical ORF; Ylr460cp [Saccharomyces cerevisiae]  
 gi|1730591|sp|P54007|YL60 YEAST Hypothetical 41.1 kDa protein ON CDC91-PAU4 inter-  
 acting protein YLR460c - yeast (Saccharomyces cerevisiae)  
 gi|1363734|pir||S59418 hypothetical protein YLR460c - yeast (Saccharomyces cerevi-  
 siae)  
 gi|717077|gb|AAB64723.1| Ylr460cp [Saccharomyces cerevisiae]

Length = 376

Score = 134 bits (337), Expect = 3e-31  
 Identities = 65/109 (59%), Positives = 81/109 (74%), Gaps = 1/109 (0%)

Query: 1 SVPTTQKAVIIEGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAKYKIGPEGGSIL 60  
 ++P T KAV+IE KAVVK + +PEL+EG L+K AVAGNPTDW HI YKIGP+GSIL  
 Sbjct: 4 AIPETMKAVVIEDGKAVVKEGIPPIPELEEGFVLIKTLAVAGNPTDWAHIDYKIGPQGSIL 63

Query: 61 GCDIAGTVVKLGPNA-STDLKVGDTGFGFVHGASQTDPKNGAFAEYARV 108  
 GCD AG +VKGPN + D +GD +GF+HG+S P NGAFAY+ +  
 Sbjct: 64 GCDAAGQIVVKLGPAPVNPKDFSIGDYIYGFIHGSSVRFPSNGAFAEYSAI 112

[>gi|6319945|ref|NP\_010026.1| Hypothetical ORF; Ycr102cp [Saccharomyces cerevisiae]  
 gi|140561|sp|P25608|YCZ2 YEAST 40.1 KD PROTEIN IN GIT1-PAU3 INTERGENIC REGION  
 gi|83274|pir||S19414 hypothetical protein YCR102c - yeast (Saccharomyces cerevisiae)  
 gi|1907240|emb|CAA42244.1| hypothetical protein [Saccharomyces cerevisiae]

Length = 368

Score = 127 bits (319), Expect = 4e-29  
 Identities = 63/103 (61%), Positives = 76/103 (73%), Gaps = 1/103 (0%)

Query: 7 KAVIIEGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAKYKIGPEGGSILGCDIAG 66  
 KAV+IE KAVVK V +PEL+EG L+K AVAGNPTDW HI YK+GP+GSILGCD AG  
 Sbjct: 2 KAVVIEDGKAVVKEGVPIPELEEGFVLIKTLAVAGNPTDWAHIDYKVGPGQGSILGCDAAG 61

Query: 67 TVVKLGPNA-STDLKVGDTGFGFVHGASQTDPKNGAFAEYARV 108  
 +VKGPN D +GD +GF+HG+S P NGAFAY+ +  
 Sbjct: 62 QIVKLGPAPVNPKDFSIGDYIYGFIHGSSVRFPSNGAFAEYSAI 104

[>gi|40741495|gb|EAA60685.1| hypothetical protein AN8651.2 [Aspergillus nidulans]  
 Length = 566

Score = 95.9 bits (237), Expect = 1e-19  
 Identities = 52/103 (50%), Positives = 68/103 (66%), Gaps = 2/103 (1%)

Query: 4 TTQKAVIIEGDK-AVVKTDVSVPELKEGTALVKVEAVAGNPTDWKHIAYKIGPEGSI LGC 62  
 +TQKAV+I K + TD +P L++ LVK AVA NPTDWKHIAY + P G ++GC  
 Sbjct: 2 STQKAVVITSPKQGGLVTDRPIP ALRDDYILVKNAVALNPTDWKHIAY-LAPPGV LVGC 60

Query: 63 DIAGTVVKLGPNASTD LKV GDTGFGF VHGA SQTDPKNGAFAEY 105  
 D AG V ++G N K GD GF+HG++Q P++GAFAEY  
 Sbjct: 61 DYAGIVEEVGKNVKKPFKKGDRIAGFIHGSNQVQPEDGAFAEY 103

>gi|1729996|sp|P54006|TOXD COCCA TOXD protein  
 gi|1027511|emb|CAA63129.1| toxD [Cochliobolus carbonum]  
 Length = 297

Score = 76.6 bits (187), Expect = 7e-14  
 Identities = 42/106 (39%), Positives = 62/106 (58%), Gaps = 2/106 (1%)

Query: 4 TTQKAVIIEG-DKAVVKT DVS VPELKEGTALVKVEAVAGNPTDWKHIAYKIGPEGSI LGC 62  
 T QKA++ E +A + +D +P+L++ LV+ +VA NPTDWKHI ++ P G ++GC  
 Sbjct: 2 TFQKAI VTEAPHRARL VSDRLIPKL RDDYILV RVT VSVALNPTDWKHI-LRLSPPGCLVGC 60

Query: 63 DIAGTVVKLGPNASTD LKV GDTGFGF VHGA SQTDPKNGAFAEY ARV 108  
 D AG V ++G + K GD GF HG + +G FAE V  
 Sbjct: 61 DYAGIVEEVGRSVKKPFKKGD RVCGFAHGGNAVFSDDGTFAEVITV 106

>gi|38111915|gb|EAA87410.1| hypothetical protein MG08380.4 [Magnaporthe grisea]  
 Length = 353

Score = 68.2 bits (165), Expect = 3e-11  
 Identities = 43/107 (40%), Positives = 66/107 (61%), Gaps = 7/107 (6%)

Query: 2 VPTTQKAVIIEGDKAVVKT D--VSVPELKEGTALVKVEAVAGNPTDWKHIAYKIGPE-GS 58  
 +P+ + A I++ DK +K D +P+ + LV+V+AVA NP D H Y+ P G+  
 Sbjct: 3 IPSARTA-IVQDDKGGLKIDRNA PMPQPRPNE LLVQVKAVAINPCD--HKMYERFPTPGA 59

Query: 59 ILGCDIAGTVVKLGPNASTD LKV GDTGFGF VHGA SQTDPKNGAFAEY 105  
 + GCD AG VV+LG + T ++GD G VHG++ + P++G FAEY  
 Sbjct: 60 VDGCFAGIVVQLGSDVKT-FQIGDRVC VCGAVHGSNPSRPESGTFAEY 105

>gi|38111928|gb|EAA87421.1| hypothetical protein MG08391.4 [Magnaporthe grisea]  
 Length = 400

Score = 62.8 bits (151), Expect = 1e-09  
 Identities = 42/110 (38%), Positives = 59/110 (53%), Gaps = 5/110 (4%)

Query: 2 VPTTQKAVIIEGDKAVVKT D--VSVPELKEGTALVKVEAVAGNPTDWKHIAYKIGPEGSI 59  
 +P++ A+I D VK + +P L+ G LVK AVA NP D+K + + G+  
 Sbjct: 46 IPSSHTAI IQHDDAGGVKITPGLPLPVLEPGQVLVKTAAVALNPCDFK-MPQRFSQAGTY 104

Query: 60 LGCDIAGTVVKLGPNASTD--LKVGDTGFGF VHGA SQTDPKNGAFAEY AR 107  
 GCD AGTVV+L + LKVG D F G + D +G+FAEY +  
 Sbjct: 105 NGCDYAGTVVQLTEEVEKNGLLKVGDRIFAACVGNNPHDKDSGSFAEYLK 154

>gi|38106089|gb|EAA52440.1| hypothetical protein MG05132.4 [Magnaporthe grisea] : Length = 361

Score = 61.2 bits (147), Expect = 3e-09  
 Identities = 42/111 (37%), Positives = 61/111 (54%), Gaps = 7/111 (6%)

Query: 1 SVPTTQKAVIIEGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAY---KIGPEG 57  
 ++P+ +A+I V V P+L++ LVK AVA NPT+ H + + P G

Sbjct: 2 AIPSKARALIKTQKGKVEVQTVPPTKLRDNYVLVKTAVALNPTE-PHAVFDDDTVQP-G 59

Query: 58 SILGCDIAGTVVKLGPNASTDLKVGDTGFGFVHGASQTDPKNGAFAEYARV 108  
 S++GCD AG VV+ G N+ K GD G HG + + ++GAFAEY V

Sbjct: 60 SLVGCDFAGVVVEAGDNSR--FKPGDRIAGMAHGGNAENMEDGAFAEYINV 108

>gi|40747875|gb|EAA67031.1| hypothetical protein AN8409.2 [Aspergillus nidulans] : Length = 333

Score = 58.5 bits (140), Expect = 2e-08  
 Identities = 39/108 (36%), Positives = 57/108 (52%), Gaps = 4/108 (3%)

Query: 3 PTTQKAVIIEGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAYKIGPE-GSILG 61  
 P Q A+ I + + +P L++ LV V+++A NP D K + ++ P G+ LG

Sbjct: 4 PKQQTALKITPEGRIA AVSSPLPSLQDNELLVCVKSIALNPFDAK--SAEMSPTIGATLG 61

Query: 62 CDIAGTVVKLGPNASTD-LKVGDTGFGFVHGASQTDPKNGAFAEYARV 108  
 CD AG +V G NA+ + +GD G V G + NGAFAEY V

Sbjct: 62 CDFAGKIVATGSNANDNFNSIGDRVCGCVFGNNPNRLDNGAFAEYVAV 109

>gi|38105395|gb|EAA51829.1| hypothetical protein MG03424.4 [Magnaporthe grisea] : Length = 350

Score = 57.4 bits (137), Expect = 5e-08  
 Identities = 40/104 (38%), Positives = 54/104 (51%), Gaps = 3/104 (2%)

Query: 3 PTTQKAVII-EGDKAVVKTDSVPELKEGTALVKVEAVAGNPTDWKHIAYKIGPEGSILG 61  
 P TQ +++ E D VV+ D P L LV+V AV NP+D K P+ +ILG

Sbjct: 6 PATQPGLVVDEHDNVVVRADCPFPSLPADQVLVRVRAVGVNPSDTKMRGPFALPQ-AILG 64

Query: 62 CDIAGTVVKLGPNASTD-LKVGDTGFGFVHGASQTDPKNGAFAEY 105  
 D AG VV +G D+ VGD G + + +P+ GAFA Y

Sbjct: 65 ADFAGDVAVGAEVR-DVAVGDRVCGAQNELFRPEPERGAFAAY 107

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Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF

Posted date: Feb 11, 2004 6:26 AM

Number of letters in database: 539,141,899

Number of sequences in database: 1,643,721

Lambda K H  
0.312 0.134 0.388

Gapped  
Lambda K H  
0.267 0.0410 0.140

Matrix: BLOSUM62  
Gap Penalties: Existence: 11, Extension: 1  
Number of Hits to DB: 13,287,786  
Number of Sequences: 1643721  
Number of extensions: 518145  
Number of successful extensions: 879  
Number of sequences better than 10.0: 30  
Number of HSP's better than 10.0 without gapping: 7  
Number of HSP's successfully gapped in prelim test: 23  
Number of HSP's that attempted gapping in prelim test: 863  
Number of HSP's gapped (non-prelim): 31  
length of query: 118  
length of database: 539,141,899  
effective HSP length: 94  
effective length of query: 24  
effective length of database: 384,632,125  
effective search space: 9231171000  
effective search space used: 9231171000  
T: 11  
A: 40  
X1: 16 ( 7.2 bits)  
X2: 38 (14.6 bits)  
X3: 64 (24.7 bits)  
S1: 42 (21.8 bits)  
S2: 66 (30.0 bits)

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<input type="checkbox"/>	L6	alpha-beta-unsaturated adj ketone\$2 with (reduc\$5 or break or cleav\$ or enzym\$)	2
<input type="checkbox"/>	L5	alpha-beta-unsaturated adj ketone\$2 and nadph	1
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<input type="checkbox"/>	L3	alpha-beta-unsaturated ketones and nadph	1917
<input type="checkbox"/>	L2	alpha-beta-unsaturated adj ketones with (reduc\$5 or break or cleav\$ or enzym\$)	2
<input type="checkbox"/>	L1	enone adj reductase	8

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